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CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
LOS ANGELES REGION

January 14, 2016

Joshua Cwikla
Los Angeles Regional Water Quality Control Board
320 W. Fourth Street, Suite 200
Los Angeles, CA 90013

**RE: Signal Hill Petroleum, Inc. Submittal of Statement
LARWQB Investigative Order No. R4-2015-0298
The Disposal of Well Drilling Fluids, Well Completion Fluids, and
Production Fluids to Land**

This statement is being submitted to the Los Angeles Regional Water Quality Control Board (LARWQB) pursuant to Investigative Order No. R4-2015-0298 dated 12/18/2015. Signal Hill Petroleum, Inc. (SHP), or any subsidiary owned and/or operated within the oil field or fields operated by SHP, has not discharged well drilling fluids, well completion fluids, and/or oil production fluids ("Fluids") to land since SHP has owned/operated their leases in DOGGR District One. SHP has not created nor operated historic, active, temporary or long-term sumps (i.e., an open pit, pond, excavation, natural depression) since they have owned/operated their leases. Furthermore, SHP does not use or discharge Fluids to any "sump" as referenced by the Los Angeles Regional Water Quality Control Board.

Additionally, the following information and methodology for obtaining this information, is being submitted as part of this statement:

Description of Disposal Methods and Destinations: Well drilling fluids, well completion fluids and production fluids are sent to a permitted third party disposal facilities, Southern California Waste Water (Santa Paula California), Green Compass (Anaheim, California) and Waste Management (Azusa, CA), where fluids are separated from solids and treated for final disposal or the solid stream is thermally treated to remove hydrocarbon liquids for further beneficial reuse. Produced water generated as a part of lease oil production is injected back into the oil reservoir to maintain reservoir pressure and enhance oil recovery. This pressure maintenance project and the injection wells are referred to as a "waterflood project" per regulations in the California Public Resources Code. Signal Hill Petroleum's waterflood operations are conducted pursuant to the permits issued and maintained by the California Division of Oil, Gas & Geothermal Resources ("DOGGR"). A "small portion" of the produced water is transferred via

pipeline to operators in the Wilmington Oil Field for their use in DOGGR permitted waterflood projects or transferred via pipeline to a POTW (Publically Owned Treatment Works).

Volumes of Fluids: SHP has estimated the well drilling fluids, well completion fluids and production fluids for all well drilling activities in the attachment to this statement. Volumes of disposed materials and fluids were totaled for eight redrilled wells. Then, the average barrels per foot drilled was calculated from this sample and a complete listing of all redrills with footage drilled was compiled. The volumes of disposed materials and fluids were then computed by multiplying the average barrels per foot by the total footage drilled for each well. In addition, the average annual water production since 1984 was computed and is detailed in this statement.

Lastly, I, David L. Slater, certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Yours truly,



David L. Slater
Executive Vice-President
Signal Hill Petroleum, Inc.

Attachment: Estimated Volumes of SHP Well Drilling Fluids, Well Completion Fluids and
Production Fluids

cc: File (SHP)

Estimated Volumes of SHP Well Drilling Fluid, Well Completion Fluids, and Production Fluids

Total Barrels of Cuttings	55,124
Total Barrels of Fluid	55,124
Total Disposed Materials & Fluid	<u>110,248</u>

Sample Population

Year	Unit	Well	Completion Date	Footage Drilled	Bbls of Cuttings	Bbls of Fluid	Total Bins	Bbls Per Foot
2014	23-26	23-26	8/16/2014	9,470	2,260	2,260	226	0.24
2014	Central	23-2	5/20/2014	3,115	320	320	32	0.10
2014	Central	72-5	12/27/2014	6,369	1,090	1,090	109	0.17
2014	D-82	D-82	9/29/2014	10,769	3,450	3,450	345	0.32
2014	East	316	9/18/2014	6,766	1,220	1,220	122	0.18
2014	West	B-301	1/27/2014	5,639	900	900	90	0.16
2015	B-302	B-302	1/12/2015	14,200	3,650	3,650	365	0.26
2015	East	309	3/20/2015	7,400	1,200	1,200	120	0.16
								<u>0.20 Average Bbls Per Foot</u>

All Other Redrills Not in Sample

Year	Unit	Well	Completion Date	Footage Drilled	Bbls of Cuttings	Bbls of Fluid
2008	West	A-35	1/15/2009	5,096	1,014	1,014
2008	West	A-40	12/5/2008	4,818	959	959
2009	Central	17-7	11/20/2009	2,387	475	475
2009	Central	23-10	8/28/2009	3,582	713	713
2009	Central	23-6	7/29/2009	5,778	1,150	1,150
2009	West	B-35	2/18/2009	3,055	608	608
2010	Central	23-20	9/11/2010	4,441	884	884
2010	Central	23-24	9/28/2010	4,534	902	902
2010	Central	23-8	3/6/2010	3,361	669	669
2010	East	38	5/17/2010	6,528	1,299	1,299
2010	East	54	6/24/2010	3,930	782	782
2010	West	B-2	2/12/2010	4,821	959	959
2010	West	B-300	8/11/2010	4,658	927	927
2010	West	C-33	10/16/2010	4,648	925	925
2011	Central	23-21	11/10/2011	7,754	1,543	1,543
2011	West	A-25	4/3/2011	1,681	335	335
2011	West	A-44	2/10/2011	1,296	258	258
2011	West	AW-7	12/29/2011	1,579	314	314
2011	West	B-24	6/24/2011	2,204	439	439
2011	West	B-29	5/11/2011	1,967	391	391
2011	West	B-51	10/25/2011	3,318	660	660
2011	West	BW-2	4/3/2011	1,832	365	365
2011	West	BW-9	12/9/2011	2,022	402	402
2011	West	C-37	1/7/2011	8,768	1,745	1,745
2012	Central	24-9	5/25/2012	3,895	775	775
2012	D-81	D-81	11/26/2012	12,211	2,430	2,430
2012	East	148	4/18/2012	2,620	521	521
2012	West	A-34	5/24/2012	2,024	403	403
2012	West	AW-4	8/7/2012	3,002	597	597
2012	West	AW-5	8/16/2012	3,518	700	700
2012	West	B-71	10/11/2012	4,637	923	923
2012	West	BW-1	3/28/2012	2,272	452	452
2012	West	BW-3	3/30/2012	3,748	746	746
2012	West	BW-6	12/21/2012	2,673	532	532
2013	23-25	23-25	6/4/2013	13,462	2,679	2,679
2013	A-59	A-59	4/14/2014	13,830	2,752	2,752
2013	Central	56-1	11/30/2013	5,307	1,056	1,056
2013	LBA	LBA-1	8/19/2013	9,750	1,940	1,940
2013	West	A-42	2/26/2013	6,217	1,237	1,237
2013	West	C-29	8/16/2013	6,993	1,392	1,392
2013	West	C-4	2/26/2013	6,542	1,302	1,302
2014	West	B-83	6/1/2014	8,319	1,655	1,655
2014	West	C-33	4/14/2014	1,123	223	223

SHP Estimated Annual Produced And Reinjectd Water (bbls - 1984 to present):

30,301,372